

10/240606 -

(depending with
09/950003)

In response to the Office Action of May 17, 2004, please amend the application as follows:

IN THE SPECIFICATION

At page 21, please amend "CLAIMS" to --We Claim--.

IN THE CLAIMS

Please amend the claims, as follows:

1. (Currently Amended) N-deacet[i]ylated N-sulfated derivatives of the k5 polysaccharide, epimerized at least to 40% of L-iduronic acid with respect to the total of uronic acids, having molecular weight from 2,000 to 30,000 D, containing from 25 to 50% by weight of the chains having high affinity for ATIII and having an anticoagulant and antithrombotic activity expressed as HCII/antiXa ratio ranging from 1.5 to 4.
2. (Original) Derivatives as claimed in claim 1, characterized in that they have molecular weight ranging from 4,000 to 8,000 D.
- 10 3. (Original) Derivatives as claimed in claim 1, characterized in that they have a molecular weight ranging from 18,000 to 30,000 D.
4. (Currently Amended) Process for the preparation of derivatives of the K5 polysaccharide as defined in claim 1, comprising in sequence the preparation of the K5 polysaccharide from Escherichia Coli, N-deacet[i]ylation and N-sulfation, C-5
15 epimerization of the D-glucuronic acid to L-iduronic acid, supersulfation, selective O-desulfation, selective 6-O-sulfation and N-sulfation, characterized in that said C-5 epimerization is carried out by the use of the glucuronosyl C-5 epimerase enzyme in solution or in immobilized form in the presence of [specific] divalent cations.
5. (Original) Process as claimed in claim 4, characterized in that said
20 enzyme is selected from the group consisting of recombinant glucuronosyl C-5 epimerase,